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CORRESPONDENCE

For the American Bee Journal.

The Real Cause of Dysentery.

JAMES HEDDON.

Mr. Doolittle says: "I believe confinement does cause the so-called dysentery. In this we differ. I claim that cold and confinement do not 'cause' dysentery, but act as an aggravation to the cause. I claim that the only theory or hypothesis which has ever been advanced that will cover all the ground of facts regarding this disease, is the one of over-vegetable matter, or 'Bacteria in the food'—one or the other.

While the statements of men we have never seen are not as convincing as logic, with which to prove their theories, these assertions are unexcelled material to disprove them. Now, I will prove by Mr. Doolittle's own statement in the article I am now answering (see first page of BEE JOURNAL for April 6, 1881) that he has formed wrong conclusions, from his own personal experience:

"Again, in the fall of 1878 our bees were prepared for winter in the best possible shape, and had nothing but white honey in their hives, said honey being collected the early part of July, for we had no fall honey. Sixty colonies were put in the cellar, and 90 left on the summer stands, two-thirds of which were packed with chaff and straw. Winter set in early, and the weather was so cold that no bees could fly with safety for nearly 4½ months. At the end of 4 months some of our best colonies were dead, with the combs and hives soiled badly, while others sitting right alongside of them were in as fine condition as could be, and remained thus, coming out strong in the spring. If it was 'bacteria' in the honey, why did not all die, as all had the same stores?"

If it was confinement, "why did not all die," I ask?

I will answer Mr. Doolittle further by

contradicting his statement, and say that bees do not all have the same honey, neither in taste, color nor consistency, and that, too, when the honey was gathered in the same apiary and at the same time. If "bacteria" was the cause, it would be only reasonable to suppose that some trees or nectaries would be infested with them, while others would not; that colonies gathering from that linden tree over east would get infected honey, while those gathering west, or perhaps a little further on, would get that free from infection.

Now, I do not say I ever saw this supposed parasite, or that I have searched the honey for an over-amount of vegetable matter, but I do say that these hypotheses are the only ones yet put forth that cover the whole ground of our experience. Again I quote:

"We also placed 60 colonies from the same yard in the cellar on the 1st of November, and did not set them out till May 1st, and 55 of the 60 came out in good condition, while we only saved 15 out of the 90 out-doors—75 dying with the dysentery, so-called. If it was infection of the honey, why did not those in the cellar die also, and especially as they stood six months' confinement? The past winter has shown the same results, only our loss is but about 10 per cent. so far."

Allow me to ask Mr. Doolittle, if it was "confinement" (now remember, that is the cause he assigned, and which he hoped to clearly show), how did the bees in the cellar so ably bear 6 months of it? Was not the trouble in the food, and the cellar being a good one, the bees ate so much less of it that the "aggravation" of cold (which causes excessive feeding) was thus removed from their conditions. He is right about the large consumption of honey causing the disease; but I imagine the worse the honey is infected the more the bees will eat.

In the literal sense of the term, nature instinctively knows but one want—hunger, and bees, like the colicky babe, try to appease the unnatural distress by feeding upon that which caused it. Thus we see that this, like other ills, whether mental or physical, possesses the calamitous capability of perpetuating itself.

I know that dysentery can be produced at will in a very short time (especially with young bees) by combined gorging and frightening, for, with all animated nature, fright has a sudden and powerful effect upon the intestines. Perhaps the nuclei contained not the clearest of honey; perhaps they did not have the dysentery unto death.

I found some years ago that agitation was a great aggravation, but not entirely productive of dysentery. See *Gleanings* for January, 1875, page 17, wherein I said, "Place your colonies in their special repositories so quietly they will not know it." Soon after H. E. Bidwell said, "Bees moved into winter quarters seem to sleep with one eye open all winter, always on the watch for that disturbance again." Mr. Milliner, of Big Rapids, Mich., refuted this idea, because he stopped up his hives and wheeled them over planks some 20 rods, and then slid them down another plank into his cellar, and all (some 200 or 300 colonies) wintered well.

Thus we see that fright is not the cause, but another aggravation, probably in a double manner, both from gorging and the mental effect, as above referred to. If cold and confinement were the causes, then honey-producing would naturally move southward this spring. Northern Michigan bee-keepers would be buying and moving bees from Southern Indiana; but the reverse is more probable, as while Northern Michigan, with its purer air and less tendency to the production of low forms of animal and vegetable life, has wintered its bees to a considerable extent, Southern Indiana is the worst cleaned out community on record.

But Mr. Doolittle is a great matter-of-fact man. Maybe he would be pleased to have some facts from Michigan, and not all confined to one man's experience (my own), but that of many real, reliable persons (who do not sell supplies), and any of whom could be written to upon the subject: H. D. Burrell, Bangor, Mich.—Bees confined 120 days; all packed out-doors; loss 20 to 40 per cent. T. F. Bingham, Abronia, Mich.—All packed out-doors; loss 20 per cent. I believe. F. C. Easton, Hartford, Mich., a farmer.—Had 22 colonies with some straw and dirt poked up against three sides of the hives; all strong to date. Not much confinement in his yard, was there? Mr. D. D. Palmer, of New Boston, Ill., I learn has lost every bee of his 240 colonies. His bees must have been "confined" about six years, judging from results.

Eleven years ago, I had colonies die with dysentery in its worst form, in less than three weeks after being put into my cellar, which was a good one. The winter was not longer than others in which I wintered my bees nicely, but in 4 months only 3 colonies out of 48 were left. The past winter there must have been a large amount of "confinement" to the square inch, especially in Southern Indiana. One of the 40 colonies above referred to was brought from a farmer's, some 4 miles away. Notwithstanding they were drawn over a rough road, the first of winter, and put right into the same cellar, without any flight, that colony, and that one only, came out in splendid condition. They gathered their honey from the same kind of flora (clover, basswood and fall flowers), but in a different location, and their honey was pure. Thus the aggravation of this rough removal had no effect upon a cause that with them did not exist. White honey is no better than dark to winter upon. Such phenomena are of common occurrence, and I ask Mr. Doolittle if any of his theories will account for the result?

The trouble is each bee-keeper, as soon as his bees die, looks over his own experience only (being so intensely absorbed in his own losses exclusively), and forms a sudden conclusion as to the cause, and a sure preventive next year, while if he would study the causes of the losses of his neighbors and others within his knowledge, he would find out he knew but little about it, and in this way be of some use in the final settlement of the problem.

All know that the main cause of our winter losses is one; that the phenomena is alike in the main; that if this disease (by common consent called dysentery or cholera) could be warded off, we would easily get along with all minor

winter losses, which are as a fire-fly is to the sun, compared with it. It is very easy for the novice telegraph operator to read a message by sound when its contents are previously known; how he can plainly hear each letter! How graphically the weather prophet can describe what he prophesied a few weeks ago about the yesterday's storm. It is to-morrow's weather that baffles him most, and that he predicts so vaguely about for fear of missing it.

We look into a hive silent in death, top-bars covered with black excrement, several inches of dead bees on the bottom board, and wisely say: "Oh! I see; things were not right here in the first place!"

Now, I am looking for the man who can come into my apiary each fall, not to fix it, but to "spot" the condemned colonies (through my ignorance of nature's laws condemned), so that I may mercifully and profitably chloroform the bees and save my honey, combs and hives clean, and the trouble of further attention, and a knowledge of where I will stand the next season. Verily, here knowledge is power to both of us, for I could well afford to pay the witch \$25 or \$50 per day and make a large margin besides. Looking at the subject in this light, through the telescope reversed, does it not look a little different?

As soon as time will permit, I will try to separate Mr. Doolittle's talk about "separators."

Dowagiac, Mich., April 20, 1881.

For the American Bee Journal.

More about Alsike Clover.

M. M. BALDRIDGE.

In the spring of 1874, a plat of prairie soil in my garden, about 40 feet square, was seeded to oats and Alsike clover. The crop of Alsike for each of the years 1875-76 was a fine one. This plat was planted with beans in 1877, owing, I think, to the Alsike having run out, or being a poor stand. The plat was plowed again in the spring of 1878, and left uncultivated. In the fall I found it nicely seeded to Alsike—the plowing having brought to the surface the seed that failed to germinate in 1876. Since the spring of 1878 the plat has not been disturbed by the plow. For the past two years the crop of Alsike has been good, and at this date (April 20) the stand is excellent, and chiefly from last season's self-seeding. The prospect for a large crop this season is as good as any preceding.

Alsike is said by botanists to be a perennial, but I do not rely upon that claim, but upon its re-seeding the land in July and August of each year when mowed for hay or seed. Close pasturing early in the season might, therefore, be an objection. Timothy will run Alsike out; so will timothy run out the common red clover in many localities—notably, Western New York, where I formerly lived. Red clover there, when mixed with timothy, will run out in two seasons; but no one ever thought of discarding it on that account. If Alsike will not do well for more than one season, it will then pay to raise it—as, when mixed with the common red or timothy, or both, it will not only improve the pasture or hay, but will produce enough honey to cover the expense, provided,

of course, the soil and season be favorable for the secretion of honey in any other kind of clover. It should be borne in mind that white clover, as well as many other plants, fail to secrete honey occasionally. It should, therefore, surprise no one to find Alsike no exception to the rule. But I have yet to see the season in my neighborhood when Alsike fails to produce honey of the finest quality and an abundance of it. St. Charles, Ill.

For the American Bee Journal.

Extracted Honey.

O. CLUTE.

Those veteran and successful beekeepers, Charles and C. P. Dadant, of Hamilton, Ill., have done the bee-keeping fraternity a good service in publishing their experience with extracted honey. They have put it in a neat, well-printed pamphlet, entitled "*Extracted Honey: Harvesting, Handling, Marketing.*" In the first part they give a brief history of the use and the inferiority of strained honey, then of the invention of the honey extractor, and a statement of the genuine excellencies of extracted honey, and of the advantages to the bee-keeper in producing it.

Under the head of "Harvesting" they give us an inside view of their methods. Anyone intending to extract on a large scale will find much of value in this record of practical experience. Their capping can, so made that the frame of honey to be uncapped rests over the can and the cappings drop on a large sieve which allows the honey to drain into a receptacle below, is a most convenient aid in saving time. A little device, for freeing the room in which the extracting is done from bees, is very ingenious. Anyone who has been annoyed in extracting by the bees, or who have been made sad by seeing so many of the little fellows beat themselves to death against the windows or the wire netting, will be glad to read this plan, and to adopt it. Though they prefer not to extract from brood combs they say it can be done without injury to the brood. This coincides with my own experience. By extracting with care the brood is not injured, and the cells being emptied of honey the queen lays in them, and you get solid frames of brood.

They store their extracted honey in barrels, using oak barrels that have contained alcohol or whisky. A most valuable part of this pamphlet is devoted to marketing. They tell us their experience for several years, which finally led them to adopt tin pails as the best package for retailing extracted honey. They use pails of different sizes, containing 10, 5, 2½, and 1¼ lbs. each. The smallest sells the best, which is only a further illustration of the fact that large numbers will buy an article that sells for a small sum, even if the sum thus paid is large in proportion to the quantity of the article obtained. In using tin pails for the extracted honey several advantages are gained. They are easily handled, they do not break, there is no leakage, when nicely labeled they look well, and they are cheap. Undoubtedly tin pails are the best package for retailing this product, which is destined in the future to occupy an important place in the consumption of nearly every family.

It seems to me that comb honey has intrinsic merits which will always keep it in large demand. The wise and enterprising producer of comb honey will always have a fair market. But there is no doubt but extracted honey has great merits—merits which now are unknown or unappreciated by very large numbers. When these merits become widely known the sale of extracted honey will be very large.

The Dadants have faith in extracted honey. They show their faith by producing it in large quantities, and selling it to advantage. They close their valuable pamphlet with some remarks which I will quote: "To sum up: Comb honey is a fancy article, for which only fancy prices can be obtained, and these prices will always be changeable, whilst extracted honey must become a staple article sooner or later. Comb

honey is difficult to transport, and to export. Extracted honey is therefore the coming honey. California will soon see before her an inter-oceanic canal which will give her full scope on the European Continent. As for us beekeepers of the Eastern and Middle States, let us improve our home market, and let us learn to produce good, cheap honey. In the meantime let us hope that Congress will put an end to all food adulterations by enforced legislation. Let us hope, also, that Congress will understand the propriety of placing the public services in the hands of the people, and will organize the railroads with the regularity, the honesty, and the careful, cheap, and prompt management which are so prominent in the Post Office Department. Then the honey resources of America will astonish the Old World, and will invade it." Iowa City, Iowa.

For the American Bee Journal.

Foul Brood.

DR. I. P. WILSON.

The JOURNAL for April 20, page 124, contains an editorial on "Foul Brood," and especial reference is there made to my indorsement of Mr. Jeffrey's views on that subject.

You are right, Mr. Editor, when you say that "facts and experiences are what we want," but it is quite evident that two men may have precisely the same experience, and yet draw very different conclusions. One may be a close observer—an independent thinker, and from him we may expect inroads made upon popular theories and beliefs, and although he may be laughed at, at first, in time he will be honored as a progressive man. Another man will "swallow" the opinions of others—follow in their wake, and go through life perfectly satisfied in believing anything that is generally believed by others.

I felt like patting Mr. Jeffrey on the shoulder, because I believed him to be thinking for himself, and thinking, too, in the right direction on this subject of "Foul Brood."

I acknowledge, Mr. Editor, that the few lines I wrote for the JOURNAL simply agreeing, fully, with Mr. Jeffrey's article, was rather an easy way of expressing my views on that subject. In fact, my professional duties require all my time during the day, except an hour or two spent in my apiary in the early morning, and with a considerable amount of work to do with my pen at odd moments, I find it next to impossible to devote much time in writing for the JOURNAL.

But now for my experience with foul brood. But perhaps what I have hitherto called foul brood is not the devastating disease described by some writers. What I have witnessed has not appeared to me as the result of disease, but as the death of the brood from insufficient animal heat. I have had nothing of the kind in my apiary for a number of years, but have a very vivid recollection of an experience of 7 or 8 years ago. Several of my colonies left their hives in disgust, and on examination I found the brood dead and putrid, the stench being so great that it was noticeable at some distance from the hive. The comb seemed to be completely infiltrated with the stench, and the hive throughout tainted from the noxious odor. At that time I had read nothing on the subject of foul brood, and in seeking for a cause I became convinced that the brood had perished from becoming chilled, and putrefaction naturally followed. Having satisfied myself of the cause, I have ever since kept a lookout for dead brood, and when I have found any, have either destroyed the comb, or, with a pair of little pliers, removed one by one of the dead brood until the comb was free from them. This, of course, must be done before the comb becomes contaminated from the putrefaction of the brood.

I cannot help thinking that a difficult solution of this question is sought by those who attribute all to fungoid growths—that spores so small the microscopist can scarcely detect them are the agents of death, and that the fungi

must be killed or the whole apiary will be lost. If one colony in an apiary has foul brood, the cause that produces it is common to all, but more especially to the weaker colonies, so the disease (?) being general throughout the apiary does not argue in favor of the commonly accepted theory.

Should there come a cold spell during the next week or two I shall expect foul brood to make its appearance in our apiaries in this section of the country, and for this reason: Warm weather set in quite suddenly here about April 15. My bees have been as busy as they could be the past week carrying in pollen and honey. The honey is stolen from the colonies that died during the winter, and still remain on their summer stands. The bees are spread out over the combs and the queens are actively engaged in laying. A cold snap would drive them closer together, and the unduly enlarged brood nest will not be sufficiently covered with bees to be kept warm, and dead brood will be the result. But it is to be hoped that this sudden change in the weather will not come. There are beekeepers that will take a frame partly filled with dead brood, and put it in the centre of a strong colony for them to "clean up," which is an unreasonable task to impose upon your little pets. To do this is simply creating a nuisance in the hive, and spreading foul brood more extensively through your apiary. Better spend a little time in picking out the dead brood, and if the comb has not been vitiated, it may be utilized to advantage.

Foul brood may be produced in another way. Separate the brood nest, when it is already as large as the bees can cover, by carrying the outside frames to the centre of the hive, thereby inviting the queen to enlarge her brood beyond the capacity of the bees to keep warm.

After writing the above it is not necessary for me to say that I do not believe it to be a disease any more than freezing or drowning is a disease.

There are other phases of this subject that I should like to refer to but my time nor your space will admit of my doing so.

Burlington, Iowa, April 27, 1881.

For the American Bee Journal.

The Cause of Dysentery, Etc.

WM. R. HOWARD.

I have just visited some of the principal beekeepers in this vicinity; their losses have not been heavy compared with our northern friends. Though we had a rough winter our bees were not confined long enough to cause dysentery. Bees are wintered on the summer stands without packing; some had a few boards leaned against the north side of the hive as wind-breaks. At one time my bees showed signs of dysentery, but a cleansing flight saved them.

I cannot agree with Dr. E. B. Southwick regarding the cause of dysentery, viz: starvation. In the Doctor's first cases the confinement was the cause, as you suggest. I have moved bees a few miles 2 or 3 times within 2 or 3 years, during rainy weather, and if they could have a good cleansing flight they suffered no inconvenience, but if not, they suffer more or less from dysentery. In one case, 2 years ago, I moved 2 colonies; a rain came on before I got home with them, a "norther" came up, and it was 3 days before they were able to get out, and when they came out they were diseased and I lost them; they had plenty of honey and brood. I bought a colony from a neighbor and moved it home; the weather was fine but there was not much honey to gather, and not being well provided with a suitable room in which to transfer them, I transferred them in the shop one morning while it was raining, to avoid being troubled with robbers. The rain continued 3 days, so that they were housed all this time; they had plenty of honey; I lost nearly ½ with dysentery. This was last spring. I also lost 2 colonies at the same time that had not been disturbed in the least, and they were in good condition, with plenty of honey and brood. Those that showed

the most signs of dysentery this past winter were the strongest colonies I had. The reason assigned was, that being strong, they kept up a sufficient heat to make them lively, and they stood by the walk where they were frequently disturbed by the constant passing. There are certain conditions in which bees will become diseased in a very short time if confined to the hive.

As will be seen from the above, when confined by wet weather, during the height of brood rearing in the spring, bees are apt to become diseased. Those "stupid bees," are never able to crawl much, to discharge their feces over the frames. Bees that die of starvation, from being away from the stores are generally found full length in the cells; if they were able to crawl much they would certainly be able to reach the cluster and stores. I have not noticed that all bees that die of starvation have the "abdomen always full of dysentery feces."

Bees that die of dysentery have their abdomen distended with a watery fecal matter, while, on the other hand, bees that die of starvation, the abdomen seems to be about the normal size. Again, bees that die of dysentery are not usually found in the cluster, and stuck fast in the cells, a condition which is nearly always noticed when they have died of starvation.

Mr. L. W. Wren, on page 117 of the AMERICAN BEE JOURNAL, asks if his bees will go 1¼ miles to a grove of linden, and as that question was not answered, I would say, that grove is within easy range of his bees.

Our bees have been set back by the late freezes we have had—3 killing freezes in this month. Our fruit is nearly all killed; in some localities the trees will die. Our forest trees had leaves nearly grown when the last and coldest snap came; the oaks, hickories and pecans look like the fall of the year. The timber looks dark inside. Corn was, in many places, frozen root and branch, and has been planted over. Gardens suffered severely, grapes will not blossom much this season, and our raton vine is dead; it was nearly ready to bloom, and is one of our best honey plants. Hlaw and honey locust are in bloom now and bees are commencing to work again.

Kingston, Tex., April 25, 1881.

For the American Bee Journal.

Double-Boarded Hives.

HENRY ALLEY.

I have used double-walled hives more or less since I began bee-keeping, and know from experience that bees will winter better in them than they will in single-boarded ones. As I formerly made these hives, I found them expensive, heavy, and requiring too much work to build. During the past winter I made considerable improvement in their construction, reducing the quantity of lumber and labor. As now made they are a very plain and simple Langstroth hive. They require the least work to put them up, and are the most convenient hive in use. There is no useless clap-trap work about them. All the lumber is ¾ thick but 4 pieces. The brood chamber, bottom board and outer cases are all independent of each other. They will be found a cool hive in summer, as there is an air-space of nearly an inch between the brood-box and outer case. In winter this can be filled with chaff, or left vacant, just as one desires. The bottom section of the outer case is 1½ inches above the top of the brood-box. This is left so that the chaff cushion will tuck down in the air space, and out of the way of the cap, and prevent upward ventilation. I use a rack holding 21 two-pound sections on these hives, and wooden separators instead of tin. By making the top section of the outer case 12 inches deeper, double the number of boxes can be used at one time, or what perhaps would be better, make an extra section to use in case two sets of caps are needed.

I will describe in a few words as possible the way these hives are made: The bottom board is 17½ inches wide by 24 long; the grain of the wood running the shortest way. I do not match them, as the joints are always tight, they come

so near the ground. Clamps for the bottom board $\frac{3}{4}$ of an inch square, by $22\frac{1}{2}$ long. These are nailed on from the edge 15-16 of an inch. The brood-box sits inside the clamps, and the outer case outside of them.

Brood-box: Sides 10 inches wide, 19 $\frac{1}{2}$ in. long, $\frac{3}{4}$ in. thick; front end 9 in. wide, 14 $\frac{1}{2}$ long; back end 9 $\frac{1}{2}$ in. wide by 14 $\frac{1}{2}$ long, both pieces $\frac{3}{4}$ thick. Nail the sides to the ends, and let them project above the ends at the top $\frac{1}{2}$ inch. This makes the rabbit for the frames to rest on. Cover the rabbit with a piece $\frac{3}{4}$ thick, 2 in. wide, and 15 $\frac{1}{2}$ in. long. Outer case; 9 pieces in all. Sides: bottom section 11 $\frac{1}{2}$ x24 in.; ends 11 $\frac{1}{2}$ and 16 $\frac{1}{2}$ in. Cut entrance in one end 14x $\frac{1}{2}$ in.; with a circular saw take out of top edge a strip 7-16 on and $\frac{1}{4}$ in. down, and the same on the bottom edge of the cap, on the inside edge. This is so the two sections will match together, and keep out the water and cold winds. Top section: sides 7x24 in., ends 7x16 $\frac{1}{2}$. If pitched roof is wanted, saw ends 2 in. wider, and taper from the center to the ends to the same width of the sides of the cover. Top boards 10 $\frac{1}{2}$ x26 in. Strip to cover joint 2x26 in. Those who have never made a Langstroth hive may have to puzzle over this some, while an old hand will readily understand it.

This hive is so plain and simple in construction, as well as very handy and convenient in every way, that it will commend itself to all. It embodies all the main features of the standard Langstroth hive. As double-walled hives are coming into general use, this description may be of some benefit to many of the readers of the BEE JOURNAL.

Wenham, Mass.

For the American Bee Journal.

Purely-Mated Queens this Year.

J. BOLES.

Inside of a radius of 8 miles I know of several who went into winter quarters with from 50 to 70 colonies, and all are now dead. I do not know of a bee left alive inside of the above distance except my own, and they have suffered badly. I put into winter quarters 9 colonies, in good order, in double-wall hives, with a space of 3 inches all around, the bottom filled with dry pine sawdust, and sawdust cushions on top, and even I have only 2 left. I examined them today, and found them in good order, with brood in all stages. The bees were carrying in pollen very fast; where they get it I cannot make out. Can you tell me? In fact they appear as busy to-day almost as at any time last summer. Among the lamented dead are colonies having 3 choice Italian queens and 1 Cyprian queen, all from the apiary of D. A. Jones. The only ones left alive are some of my own rearing. Nearly all bee-keepers in this part have been using the old box hive and black bees—but these are things of the past. No trouble to have purely-mated queens this year; this is one consolation at least. I cannot afford to have my bee-futures lying around and having only 2 colonies of bees to attend to. I must look around me and try and buy 5 or 6 good colonies, so that when I get the blues in my office, I can have something to take up my leisure time. I have a few questions to ask, which you will kindly answer, if not imposing too much on your space. 1. Have you any knowledge of any hives having been made round, in the shape of a barrel, and so arranged as to lie on their side? 2. If so, please give dimensions of hive, and how made? 3. Had it movable frames; if so, were they made circular like a barrel hoop, and of what material made, and how arranged in the hive? 4. Was entrance in the side or end? Allow me to thank you for the picture of yourself which you gave us some time ago. I must say you are rather a handsome-looking man to be a bee-keeper; also, to congratulate you on the success of the Weekly BEE JOURNAL. Of all the papers coming into my office, none are as welcome as the Weekly BEE JOURNAL.

Ridgeway, Ont., April 20, 1881.

[It requires more knowledge of your surroundings than we possess, to inform you where your bees are getting pollen.

In Syria and other countries in the East, bees are kept in clay cylinders, one end of which is entirely closed, and the other partially. No frames are used in these. We have no knowledge of a barrel-shaped frame hive; if made, it was not successful enough to be worthy a place in history or perpetuation in use.—ED.]

For the American Bee Journal.

Wintered Very Successfully.

H. R. BOARDMAN.

I never had better success than the past long, cold winter, that has been reported so universally disastrous to bees. I cannot see what the long cold winter has to do with success as long as the bees are in proper condition and kept so inside a warm house. On April 15 I put out 140 colonies that had not seen the sunlight since Nov. 15. They seemed quite astonished by the warm sunshine of an April day. Their Rip Van Winkle sleep had carried them over a long experience of 5 months of cold and storm in the outside world. Four rather weak colonies only had pushed by, getting away from their stores and starving. I am satisfied that I could have kept them in a month longer in good condition, but did not deem it wisdom to do so as brood rearing had nearly ceased for lack of pollen and water. I fed flour liberally for a few days, when natural pollen appeared. They are doing nicely, filling up with brood and young bees. I wintered 70 colonies at another place in another bee house, but could not obtain the condition I considered necessary for certain success. These did not winter quite so well, the loss being 6 light colonies mostly, although from the same cause before mentioned. The bees, too, were not all in that fine bright condition of the others. These were set out at 4 $\frac{1}{2}$ months. They are also doing well now. Necessities, no chaff packing, no feeding—housed in a bee-house constructed for the purpose in view of success; temperature average about 40°; artificial heat at times; the bees gorged themselves all the fall on apples, peaches and grapes; about $\frac{1}{2}$ of the colonies were light in stores when put up; I wintered in the same place during the warm winter of one year ago with equal success. I am entirely unshaken by the numerous reports of the fearful disaster in wintering. I am quite certain that with proper management bees may be wintered with as much certainty as any stock, at all times.

East Townsend, O., April 29, 1881.

[We take pleasure in congratulating Mr. Boardman on his success. We have heard of several who had good success in house-wintering.—ED.]

For the American Bee Journal.

Packing Bees for Winter.

B. M. LINGLE.

Quite late last fall I put 31 colonies into winter quarters—10 being weak nuclei. I fed 125 lbs. coffee A sugar. Just before cold weather sets in is the time to do the packing. I use dry goods boxes about 6 inches larger than the hives; take the top and bottom off and set the box over the hive; cut a notch in the box to correspond with the entrance of the hive; place three blocks from front of hive to box, and pack all around with chaff; after this is done, take the top off the hive and replace it with a blanket, then fill with chaff. This will leave the chaff 6 inches deep over and around the hive. After this is all done, put the top on the box to keep all dry. I have been packing in this way for several years, and have wintered successfully. After unpacking, I find my bees in fair condition; 2 nuclei, covering but 3 combs, froze; 2 starved, and 1 was queenless. I united this one with a weak colony, which leaves me 26 colonies in fair condition. I think the chaff packing is the successful way to winter bees in this latitude. Success to the AMERICAN BEE JOURNAL.

Paoli, Ind., April 25, 1881.



Local Convention Directory.

1881. Time and Place of Meeting.
May 4—Tuscarawas and Muskingum Valley, at Cambridge, Guernsey Co., O.
J. A. Bucklew, Sec., Clark, O.
5—Central Michigan, at Lansing, Mich.
10—Cortland Union, at Cortland, N. Y.
C. M. Bean, Sec., McGrawville, N. Y.
10—N. W. Wisconsin, at LaCrosse, Wis.
L. H. Pammel, Sec.
10, 11—Eastern New York, at Schoharie, N. Y.
W. S. Ward, Sec., Fuller's Station, N. Y.
11—S. W. Wisconsin, at Darlington, Wis.
N. E. France, Sec., Platteville, Wis.
12, 13—Texas Bee-Keepers' Association, at McKinney, Collin Co., Texas.
W. R. Howard, Sec., Kingston, Hunt Co., Tex.
17—N. W. Ill. and S. W. Wis., at H. W. Lee's, Pecatonica, Ill.
J. Stewart, Sec.
17—N. W. Union, at Hastings, Minn.
F. B. Dorothy, Sec.
19—Champlain Valley, at Bristol, Vt.
T. Brookins, Sec.
Sept.—National, at Lexington, Ky.
—Kentucky State, at Louisville, Ky.
Oct. 11, 12—Northern Michigan, at Maple Rapids.
12—Ky. State, in Exposition B'dg., Louisville, Ky.
W. Williamson, Sec., Lexington, Ky.

In order to have this Table complete, Secretaries are requested to forward full particulars of time and place of future meetings.—ED.

Texas.—I have received and accepted the resignation of Vice-President F. F. Collins, and at his suggestion have appointed Judge W. H. Andrews, of McKinney, Texas, to fill the vacancy in the office of Vice-President for Texas of the North American Bee-Keepers' Society.
N. P. ALLEN, Pres.

The bee-keepers of Missouri will meet in Convention at Mexico, Mo., on June 2, 1881, at 10 a. m., and hold a session two days. Dr. N. P. Allen, of Smith's Grove, Ky., President of the North American Bee-Keepers' Association, is expected to be present to assist in organizing a Bee-Keepers' Association; other leading bee-men are expected, due notice of which will be given. The programme will be published in a short time and will embrace such questions as will be of interest, both to the novice and practical apiarist. All are invited to partake of and assist in this much needed organization. Those that cannot come will confer a favor by giving us a communication on some subject of interest to bee-men.
P. P. COLLIER, Vice Pres.
N. A. B. K. Association, for Mo.
All papers of Missouri please copy.

The Washtenaw County and Southeastern Michigan Bee-Keepers' Association will meet at the Court House, in Ann Arbor, Thursday, May 12, 1881.
N. A. PRUDDEN, Pres.

The next meeting of the N. W. Illinois and S. W. Wisconsin Bee-Keepers' Association, will be held at H. W. Lee's, 2 miles n.w. of Pecatonica, Winnebago county, Ill., on the 17th of May, 1881.
J. STEWART, Sec.

The Eastern New York Bee-Keepers' Association will hold a Convention in the Court House at Schoharie, N. Y., May 10 and 11. All interested in bee-keeping are cordially invited to attend.
W. S. WARD, Sec.
Fuller's Station, N. Y.

The Texas Bee-Keepers' Association will hold their third annual Convention at Judge W. H. Andrews' apiary, in McKinney, Collin Co., Texas, on the 12th and 13th days of May, 1881.
WM. R. HOWARD, Sec.
Kingston, Hunt Co., Texas.

The North Western Wisconsin Bee-keepers Association will meet at Germania Hall, LaCrosse, Wis., on Tuesday, May 10, at 10 a. m. All interested in bee-keeping are requested to be present.
L. H. PAMMEL, JR., Sec.

The Northern Michigan Bee-Keepers' Association will hold its fourth Annual Convention at Maple Rapids, Clinton Co., Mich., October 11 and 12, 1881.
DAVID EISELHMAN, Pres.
O. R. GOODNO, Sec., Carson City, Mich.

The Michigan Bee-Keepers' Association will convene in Pioneer Rooms of the State Capitol at Lansing, May 5. The following is the programme:

Regular order of business.
Annual address by Pres. W. J. Ashworth.
Address by T. G. Newman, editor of American Bee Journal; subject, Rise, Progress, Present Condition and Future Prospects of American Apiculture.
Essay—Profitable extent of bee-keeping, by James Heddon, Dowagiac.
Essay—Requisites of an Apiary, by H. A. Burch, South Haven.
Essay—Some important facts in bee-keeping, by Prof. A. J. Cook, Michigan Agricultural College.
Discussions and remarks.
Examination of exhibits.
All exhibitors of supplies are requested to send samples to the Secretary, with prices and descriptions attached, and all transportation charges must be prepaid by the exhibitors. GEO. L. FERRY, Sec.

The Southwestern Wisconsin Bee-Keepers' Association will meet at the residence of W. B. Wallis, at Darlington, Wis., on Wednesday, May 11, 1881, at 10 a. m.

There will be an opportunity given for questions and answers. Interesting papers will be read, among which may be mentioned:
Location of Apiary, by E. France.
Implementation of the Apiary, by R. D. Wilson.
Feeding Extracted Honey to Produce Comb Honey, by Dr. C. Abraham.
Foundation, and its Advantages, by D. H. Sylvester.
Bee Forage, by H. Gilmore.
Preparation for Winter, by George Fox.
Wintering Bees, by Reese Powell.
Advantage in Preparing Papers, by E. France.
Profitable Bee-keeping, by E. Pike.
Bee-keeping, will it Pay? by N. E. France.
The Prize Essay of the N. E. Convention, on How to make the Apiary the most Profitable, by George W. House, of Fayetteville, N. Y.
A cordial invitation is given to all.
N. E. FRANCE, Sec., Platteville, Wis.

Programme of the Northwestern Bee-Keepers' Union, to be held at Hastings, Minn., May 17, 1881:

- 1.—Address of Welcome, by J. N. Searls.
- 2.—Reports of committees.
- 3.—Reports from all—number, kind and condition of bees.
- 4.—A paper by Pres. A. Tidball, on honey-producing plants and flowers.
- 5.—A paper by Dr. P. Barton, of St. Paul, on honey as food and medicine.
- 6.—Apiary culture and our fairs, by Hon. William Avery, of St. Croix Falls, Wis.
- 7.—A paper on sales of honey, by F. B. Dorothy, of Taylor's Falls, Minn.
- 8.—A paper on wintering bees, by L. Day, of Farmington.
- 9.—Progressive bee-culture, by J. G. Teter.

The above subjects will be open for discussion. In addition to the above, the following subjects are suggested:

- 1.—Essential properties of a good bee hive.
- 2.—How to prevent and cure foul brood.
- 3.—How to prevent spring dwindling.
- 4.—Comb Foundation, with dividing and natural swarming.
- 5.—Appointment of committees.
- 6.—Election of officers. Adjournment.

All bee-keepers are cordially invited. Entertainment free.
F. B. DOROTHY, Sec.

The Annual Meeting of the Society for the promotion of Agricultural Science will be at Cincinnati, on Tuesday, Aug. 16, 1881, the day preceding the sessions of the American Association for the advancement of science.

Honey and Beeswax Market.

BUYERS' QUOTATIONS.

CHICAGO.

HONEY.—The market is plentifully supplied with honey, and sales are slow at weak, easy prices. Quotable at 15@18c. for strictly choice white comb in 1 and 2 lb. boxes; at 10@12c. for common dark-colored and broken lots. Extracted, 7 $\frac{1}{2}$ @9 $\frac{1}{2}$ c.
BEESWAX.—Choice yellow, 24@25c; dark, 15@17.

NEW YORK.

HONEY.—Best white comb honey, small neat packages, 14@17c; dark 14@17c; large boxes 1c. less.—White extracted, 9@10c; dark, 8@9c.
BEESWAX.—Prime quality, 24@25c.

CINCINNATI.

HONEY.—The market for extracted clover honey is good, at 8@10c. Comb honey is of slow sale at 15c. for the best.
BEESWAX.—19@20c. C. F. MUTH.

SAN FRANCISCO.

HONEY.—Since the 1st inst. there have been exported 1,503 cases and 25 bbls. to Liverpool, and 50 cases to Sydney. Receipts in same time have been 500 cases, 103 bbls. and 15 kegs. Prices remain the same, with a good supply of extracted still on hand. We quote white comb, 13@14c; dark to good, 9@11c. Extracted, choice to extra white, 9@10c; dark and candied, 5@7c.

BEESWAX.—22@24c, as to color.
STEARNS & SMITH, 423 Front Street.
San Francisco, Cal., April 16, 1881.

CLUBBING LIST.

We supply the Weekly American Bee Journal and any of the following periodicals, for 1881, at the prices quoted in the last column of figures. The first column gives the regular price of both:

Publisher's Price.	Club.
The Weekly Bee Journal (T. G. Newman)	\$2.00
and Gleanings in Bee-Culture (A. I. Root)	\$2.00
Bee-Keepers' Magazine (A. J. King)	\$3.00
Bee-Keepers' Exchange (J. H. Neilsen)	\$2.50
The 4 above-named papers	\$7.50
Bee-Keepers' Instructor (W. H. Thomas)	\$2.00
Bee-Keepers' Guide (A. G. Hill)	\$2.00
The 6 above-named papers	\$15.00
Prof. Cook's Manual (bound in cloth)	\$2.50
Bee-Culture (T. G. Newman)	\$2.00
For Semi-monthly Bee Journal, \$1.00 less.	
For Monthly Bee Journal, \$1.50 less.	

THE AMERICAN BEE JOURNAL

THOMAS C. NEWMAN.
EDITOR AND PROPRIETOR.

CHICAGO, ILL., MAY 4, 1881.

Using Combs in which Brood has Died.

Please tell us whether decaying brood found in the combs of those colonies that recently perished, has any tendency to create foul brood or anything similar in its nature, if left to take its own course until used next summer? A few days ago we were cleaning hives and combs from colonies that had lately died, and among the general contents of such hives we found more or less dead brood in different stages of putrefaction. On examination, we noticed in some of these cells a brownish substance, in appearance some like that found in foul brood (we imagined), but without scent. It seemed like a waste to cut out of the center of almost perfect combs pieces as large as one's hand, or larger, for the sake of disposing of a few such scattered cells as mentioned, providing there is no danger or risk in leaving them in.

GREINER BROS.

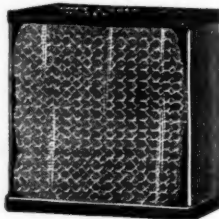
Naples, N. Y., April 18, 1881.

It is not foul brood. The brood was deserted by the bees for some cause, and died; perhaps had been spread, or were not bees enough to properly care for and keep it warm—or for some other cause. We would not, however, leave it in the hive, nor cut or mutilate it; but uncap those cells in which brood has died, then put them away in some dry place till the dead brood has dried and shrunken. When wanted for use, put them one or two at a time in the stronger colonies, where they will be speedily and thoroughly prepared for use. In order to make them desirable for brood combs, it is necessary that the cells be ready for the queen's occupancy as soon as she reaches the comb, or she will either pass over the comb entirely or deposit her eggs here and there wherever she finds unobjectionable spots. Every close observer has noticed that the queen invariably makes a close inspection of the cell she proposes using, and unless perfectly clean she will not deposit an egg in it. With a cell here and there occupied with dead larva, it is easy to imagine how the living larva adjoining may be more or less liable to become chilled, as inanimate bodies are not possessed of the natural heat which pertains to those living. It is undoubtedly this natural law which instinctively impels a "good" queen to deposit her eggs compactly in an oval space in the comb, thus economizing to the greatest extent the heat of each individual larva to help keep its neighbor warm. To what extent the presence of dead brood in the combs (which has died from natural causes) may have caused the death of contiguous brood we cannot say, but certainly it has contributed largely to many of the theories regarding "foul brood" and its tendencies, and perhaps in rare instances has had a tendency to enfeeble many of those bees which survived to maturity.

It may not be out of place, in this connection, to advise that the stronger colonies be selected to do all the drudge work of the apiary, such as cleansing befouled combs, removing mold from combs, and pulling out such dead bees from the cells as will not shake out when dried and shrunken. If your strong

colonies have their hives already filled with frames of brood, then remove sufficient to accomplish the purpose; but where a colony is already feeble, and it is desirable to build it up rapidly, no disagreeable work should be imposed upon the bees to perform, for it will tax their energies sufficiently to provide pollen, water, and do the feeding and nursing necessary for successful brood-rearing. A strong colony will accomplish in a few hours that which would embarrass a weak colony for nearly a whole season.

Perfection Honey Box.—Mr. J. E. Moore, of Byron, N. Y., sent us a nice box of honey enclosed in his Perfection Caps, of which the following is a correct representation:



All will see that it makes a neat package, very attractive and enticing, and free from leakage, when glass is used. These caps are a rapid and beautiful method of glassing.

This issue of the BEE JOURNAL, the first in the month, goes to all the subscribers of the Weekly, Monthly and Semi-Monthly. Should any of the latter wish to change to the Weekly, they can do so at any time, by paying the difference.

N. Langers, Belgium, Wis., has wintered without loss 70 colonies, in a bee house, constructed with double walls filled, like ice-houses, having an underground tunnel 50 feet long, for ventilation; it is also provided with upward ventilation.

Dr. N. P. Allen, Smith's Grove, Ky., President of the National Society, desires the Bee Associations and Vice-Presidents for the different States, to send him statistical information concerning bees and honey in time for use at the National Convention at Lexington next fall.

We have received the following late Catalogues of apian supplies:

A. B. Weed, Detroit, Mich.—4 pages—Bees and supplies.

H. H. Brown, Light Street, Pa.—12 pages—Bees and apian supplies.

Wm. Ballentine & Son, Sago, O.—1 page—Queens and bees.

J. T. Scott & Bro., Crawfish Springs, Ga.—Italian bees, queens, hives, etc.

Rev. A. Salisbury, Camargo, Ill., desires to have the following correction made:

I see you have accredited the article I wrote for and which was read at the North Eastern Convention, to L. M. Wainwright, Noblesville, Ind. Of course it was through mistake and not intentional. Nevertheless, I regret having been the cause of laying so much imperfection to the charge of another.

The essay was printed just as it came from the Secretary. The BEE JOURNAL is in no way responsible for the credit.

AMONG OUR EXCHANGES.

MISCELLANEOUS.

Bee-Culture in Kansas.—The Quarterly Report of the Kansas State Board of Agriculture, for the quarter ending March 31, 1881, is received, and under the heading, "Condition of Bees," we find the following item:

Correspondents from only about half the counties in the State report at all on bees, in their quarterly reports. Reports from 15 counties are very favorable, the bees having come out of winter quarters well, and seem to be in a fair condition: Chautauqua, Cherokee, Elk, Franklin, Harvey, Jackson, Labette, Lincoln, Montgomery, Nemaha, Rawlins, Riley, Saline, Sedgwick and Shawnee. In the following counties they are reported to have done poorly, in many cases from 25 to 50 per cent. having died from the long cold winter and neglect: Allen, Anderson, Atchison, Bourbon, Brown, Butler, Cloud, Cowley, Crawford, Doniphan, Greenwood, Jewell, Johnson, Leavenworth, Linn, Lyon, Marshall, Miami, Mitchell, Phillips, Pottawatomie, Republic, Wabaunsee, Washington, Wilson, Woodson, and Wyandotte. Those who have made a success in this industry speak encouragingly, and say that it is a want of attention that produced a failure.

Bees Without Stings.—The *Bienen-Zuechter*, the organ of the "Societe D'Apiculture d'Alsace-Lorraine," remarks as follows concerning the stingless bees of South America, and their introduction into the United States:

"The discovery has been made in South America of yellow bees, without stings, and some bee-keepers of the United States have taken the preliminary steps to import this bee into that country. We have informed our readers that Mr. Benton, a bee-keeper of the United States, went to the Island of Cyprus and from there to the Island of Java, to study the *Apis Dorsata*, and would try to import some specimens of these into America. It is said that this bee is much larger than our handsome queens. Let us hope that Mr. Newman, after what he said in the Convention at Cincinnati about the improvement in the race of bees, will be able to cross this bee with the one without sting, then we will have the *bee of the future*—a very precious bee, which nobody will fear, and having a longer tongue and larger body, will be able to feed on our immense red clover fields, the nectar of which is not very accessible to the ordinary bees."

Glucose.—In the *London Journal of Horticulture*, Mr. Frank Cheshire, while commenting upon the discussions on adulteration in the AMERICAN BEE JOURNAL, says:

Adulteration with glucose is a base fraud which all good men must reprobate. Its use as an adulterant is most disgraceful, and all should join hands in fearlessly doing our level best to get the right ticket put upon any man (and his wares) who descends to a practice which, if it does not lower him, wrongs all those who are striving to do honestly. Glucose, although chemically like a portion of honey, is altogether wanting in that which makes honey what it is. Its aroma, the delicate distillment from a thousand flowers inimitable and incommunicable alike, is not there, and he who gives the one for the other is as truly criminal as he who tenders knowingly a base coin.

The man who will purchase a number of colonies of bees, set them up in some out-of-the-way place, and give the matter no further attention, should keep out of the business altogether.—*Grange Bulletin*.

Honey Dew.—The *Patrons' Guide* gives the following on this subject:

"Honey dew" is a name commonly applied to a sticky substance often seen, during hot, dry weather in the summer, on the leaves of hickory and other forest trees. It is not, as many suppose, a natural deposit from the atmosphere, given for the especial benefit of bees, but is exuded from the leaves direct. Hence "honey dew" may be correctly termed a partially dried-up sap. Liebig, in his excellent work, "Agricultural Chemistry," says: "Certain diseases of trees, for example that called 'honey dew,' evidently depend on the want of the due proportion between the quantity of the azotized and that of the unazotized substances which are applied to them as nutriment."

The Manufacture of Glucose.—Mr. Wm. Lynch, Maysville, Ky., has sent us the following from the Cincinnati *Star Times*:

A recent lawsuit tried before Judge Haight, of the Supreme Court of New York, has revealed to the public the extent of a new manufacture of general interest. The production of glucose, or "grape sugar," from corn is of very recent date but of great proportions. It is estimated that from 12,000,000 to 16,000,000 bushels of corn were consumed the past year in the manufacture of this comparatively new article of commerce; several establishments consuming from 4,000 to 5,000 bushels each per day. The first use this so-called grape sugar was put to was in the adulteration of ale, beer, porter and liquors. The consumption was necessarily limited in this direction, but when it was found that it could be successfully used in the adulteration of syrups and sugar the production has increased with startling rapidity. It was proven in the case above referred to—*Alberger vs. Hamlin* and the Buffalo Grape Sugar Company—that the profits of one firm amounted to one-half a million dollars during the year, and that the profits on the amount of capital invested were simply fabulous. A glucose factory is better than a field of diamonds or a gold mine. Of course rivers of this fraudulent sweetness will soon flow through the land, and permeate every article of food or drink to which it can be made to assimilate in any form.

The means for detecting the adulteration are very easy. Glucose being less soluble than sugar, settles to the bottom of the cup and, when left to dry, forms a hard film, similar to gelatine. On the surface of syrup thus adulterated a film or skin forms on exposure to the air, which becomes corrugated as the exposure is prolonged. These tests are capable of detecting a very small percentage of the foreign element in sugar or syrup.

The Palaski, N. Y., *Democrat* remarks as follows, concerning Professor Cook's "Manual of the Apiary":

This excellent work has reached its seventh thousand. This shows the appreciation of that book by that portion of the public interested in bee-culture. We advise all to buy the book who are interested in rearing bees; if you are interested in the entomology of the bee; if you want to be posted in bee-botany; if you would learn of bee-enemies; and even if you are only in pursuit of instructive reading, told in an interesting manner, by one who thoroughly understands his subject.

An exchange gives the following "punny-dote":

"Did any of you ever see a bee's sting?" inquired a teacher of a class.
"I have," exclaimed one.
"Where?" asked the teacher.
"Stuck in the nose of a fellow that caught a bee and tried to smell it," said the boy, laughing.

The Wisconsin Farmer fully approves the articles on "Planting for Honey," which have from time to time appeared in the BEE JOURNAL, and copied a portion of one of them, with a very warm indorsement.

SELECTIONS FROM OUR LETTER BOX

Utilizing Old Combs.—I put into winter quarters last fall 14 colonies of bees in chaff hives; only 4 of them came through alive, and they are not very strong. I have 80 frames, containing 125 to 150 lbs. of honey, from the colonies that died, and am desirous of building up again—how can I best use these frames of honey and comb? Please inform me through the next JOURNAL.

B. E. MILES.

Glenwood, Pa., April 22, 1881.

[You will find full instructions for utilizing them to the best advantage on pages 86 and 100 of the Weekly BEE JOURNAL.—ED.]

Nine-Tenths of the Bees Dead.—Nearly 9-10 of the bees in this section are dead; a few will purchase sparingly; others will abandon the pursuit. Many feel that a part of the family have died—their pets are missed. All feel that it is as necessary to care for our bees as for chickens, pigs and calves. The roads are impassable in some places, being blocked still with snow. The Rock River is as high as it has been for 30 years.

A. RICE.

Byron, Ill., April 21, 1881.

Best Hive for Use in Germany.—In this part of Germany we have two principal crops—first, the rape, which blooms in April and May, and second, the linden, which blooms in June and July. The first is the most important. Now, I would submit you these questions: What is the best hive? Is it better to have large populations in large hives, or small ones in small hives?

H. BUTSCH, JR.

Alsace, Germany, March 26, 1881.

[The standard Langstroth is the best for your latitude. This holds 10 frames, 17½ inches long by 9½ deep. It is better to have a large population in a medium-sized hive—that is, a hive which a good queen will always keep well filled with brood. Many of our successful honey producers remove two or three frames from the brood chamber, substituting division boards in their place, at the beginning of the honey flow, thus leaving the lower story entirely to the queen, and forcing the bees above with their surplus. Bear in mind, you never can make your hive too populous for the best results in honey.—ED.]

Upward Ventilation.—I put 9 colonies in the cellar early in the winter; one of them was very weak and of course it died; 2 had chaff boxes. I put on one and when I tried to put on the other, the bees were very cross; I put down the cover and thought I would leave them a little while, but being very busy at that time, I neglected to attend to it, and the result was I lost the colony. I have 7 colonies left in good condition. I am convinced that the cellar is the place to winter in and also that upward ventilation is required; mine were all open at the top except the one that died. Most of the bees in this vicinity are dead except those in cellars.

State Centre, Iowa. T. PARKE.

Bees Wintered Successfully.—I wintered my bees in the bee houses, the loss being so small that I do not miss them in the yard. They are in unusually good condition for the season. I have as yet handled but few and do not care to disturb them until it becomes necessary. I will comply with request of Mr. Reynolds in a short time—see page 118, No. 15. I know how it goes to lose my bees in past years, before I had so much experience. Now, when I can look on, it is about as it used to be with us, they died through the water. I am more than pleased with the Weekly BEE JOURNAL; could not keep house without it.

J. H. ROBERTSON.

Pewamo, Mich., April 27, 1881.

Robber Bees.—I have learned a successful remedy for robbing. I find out the hives the robber bees come from, then feed them with syrup made of coffee A sugar, placing it over the brood and letting it run down over the combs, and if they do not stop robbing then, I pour it over the brood until it runs out at the entrance, and that gives them work to keep other bees out of the hive. It matters not how rich a colony is, feed it as I direct, and you will conquer the robbers every time. I do this feeding early in the morning, and my bees are all living and doing well. Within six miles of my apiary I do not know of but 3 colonies living now. I live in hopes of a good honey harvest.

R. M. OSBORN.

Kane, Ill., April 21, 1881.

Wintered Well.—Spring has come at last. Such a winter man has seldom been called on to endure. My bees wintered well on the summer stands, without any protection, and I lost but one. They died in all parts of the hive—scattered in the upper and lower stories—but few together. They were strong, with plenty of sealed honey. Why was this? Neither combs nor hive were soiled.

P. P. COLLIER.

Mexico, Mo., April 17, 1881.

[Probably during a milder spell the cluster became divided, when a sudden change occurring in the weather, the bees became chilled, and thus perished before they could again unite.—ED.]

Bees in Good Condition.—I keep only 20 colonies—have no time to attend to more. I lost one during the past winter; all the rest are in fine condition. The one lost would have come through all right had I not unintentionally neglected to give it proper care last fall.

G. TOMPKINS.

Cincinnati, O., April 27, 1881.

The Loss in Michigan Two-Thirds.—As near as I can learn the loss of bees in Michigan has been ⅔ up to this time. The season has opened very fine now, and bees are gathering a little honey from soft maples, which seldom yield honey in this latitude. Daffodils are some of the earliest flowers that bees work on here.

J. O. SHEARMAN.

New Richmond, Mich., April 26, 1881.

The Cause of Bee Mortality.—In this vicinity last fall there were 462 colonies, now there are only 100. The few in chaff hives are doing well. The cause of this mortality began a year ago. Last April was hard on the bees; in June they were starving. For about a week in July bees did well; then it came off so hot that they did not make quite a living from that time out. So they did not have enough food to live on, and some of us resorted to feeding sugar. I tried grape sugar with coffee sugar, equal parts. (No more grape sugar for me to feed bees on in the winter.) Bees in good chaff hives will winter well; if they need food give them candy made of good sugar early in October, and they will winter well even though it be as severe as the one just past.

Hartford, Wis. I. S. CROWFOOT.

Rather Discouraging.—My report is rather discouraging; I have but a mere shadow to build upon. I have but 2 colonies left from 22 in the fall; but I expect to fill my yard and get some honey. There has been reported to me within a radius of 10 miles, 838 colonies put into winter quarters, of which only 140 are alive now; I think not more than 100 will live to see the clover bloom. Bees were nearly all wintered on their summer stands, but very few being packed or given any special care. Mr. G. P. Wilcox had 7 colonies packed with chaff cushions on sides and top, all came through strong, while his neighbor lost over 40 out of 47; they were black bees in log gums. My bees brought in the first pollen on the 19th inst. I like the Weekly BEE JOURNAL so well that I should take it if my bees had all died. Accept our thanks for your efforts in giving us such a paper so well suited to our wants.

P. A. RIEGLE.

Arlington, O., April 28, 1881.

Amber Cane Syrup, etc.—I have built a honey-house and intend ceiling it inside with matched pine lumber. Would you fill the space (4 inches) with sawdust? Would you use green sawdust, if you could not get it dry? Do you think it would do bees any harm to feed them amber cane syrup mixed with an equal amount of honey, during the fore part of May? I packed 28 colonies of bees in wheat chaff on their summer stands last fall, of which I lost 3. A good many bee-keepers about here have lost all their bees.

G. H. DENMAN.

Pittsford, Mich., April 20, 1881.

[Have the material dry with which you pack the air-space, whether it be sawdust, chaff, tan-bark, etc., and have a well-regulated ventilator. When bees are flying freely, we think you can feed amber cane syrup and honey with perfect safety.—ED.]

Losses in Central Wisconsin.—Bees hereabouts are somewhat dead. D. H. Wright went into winter quarters with 7 colonies, and came through with all alive, but 1 was queenless. I had 14 in the fall and lost 4; 2 of the 10 left are weak. D. D. Daniher had the same number as myself, and lost all but one. All the above were wintered out-doors in chaff and straw. Cellar-wintering, from what I hear, has been no better. A man by the name of Long lost all but 5 out of some 40 colonies put into the cellar.

JOHN CORSCOT.

Madison, Wis., April 21, 1881.

Had No Winter Flight.—I placed 157 colonies in the cellar Nov. 22; removed them to their summer stands April 21; found 9 dead and most all of the remaining 148 in good condition. The temperature in our cellar was 45° to 52°. Mr. Geo. W. House, of Fayetteville, in his essay read before the North Eastern Bee-Keepers' of New York, says a winter flight is necessary for successful wintering. I do not agree with him. Our bees have wintered well for the past two seasons without a flight.

C. M. WOOLVER.

Hallsville, N. Y., April 26, 1881.

Wintered in the Cellar Without Loss.—I put 39 colonies in the cellar Nov. 1, and took them out April 20; all had living bees in them, but 3 were queenless, and these I united with 3 weak ones. I now have 36 in fine condition. They were confined 170 days. There is a remarkable absence of brood, only 3 have any sealed, but the queens have filled from 2 to 3 frames each with eggs during the past 4 days. The bees are carrying pollen; the weather is delightful but the snow is a foot deep in the woods; as my bees all have a good supply of honey I do not anticipate any further losses. My bees are pure blacks and hybrids; the blacks wintered the best. I also put 15 colonies of Italians (a neighbor's) in my cellar, only 8 of which came out alive. Mrs. P., who had 26 colonies on the summer stands, covered with snow, lost all; others have lost heavily.

D. H. HOPKINS.

Bear Lake, Mich., April 24, 1881.

Wintered in a Clamp Without Loss.—I commenced the season with 40 colonies, increased to 70, obtained 1,650 lbs. of comb honey. Nearly all were in box hives, but I put the swarms in frame hives, one of which gave me 130 lbs., and 2 others about 100 lbs. each. I buried 66 colonies Nov. 13-15, and took 34 out of the first trench April 22, and 32 out of the other trench the 24th; all alive, but a few of them are weak in bees but have plenty of honey and to spare. Everybody who left their bees out-of-doors through the winter, in this locality, have lost nearly all, and some have lost badly when wintering in cellars, so I think I can cry "Eureka" when I lose none out of 66.

D. B. BOOMHOWER.

Rensselaerville, N. Y., April 25, 1881.

[Mr. B's report is refreshing in the midst of disasters. We should like to have him give his manner of preparing the clamp, etc., for a future number of the BEE JOURNAL.—ED.]

Pollen From Sawdust.—In this climate, New York, at an altitude varying from 1,300 to 2,000 feet above tide waters, no pollen is yet obtainable from any source. Bees work lively to-day on farina of grain. At least 35 per cent. of the stock of bees in this region last fall have gone "where the woodbine twineth." Even in chaff hives bees do not survive long winters without a due allowance of honey, and with both of those conditions present we have the phenomena of dead colonies in the winter and spring, nor does chaff packing triumph over other modes of salvation. The first time that bees gathered anything to store in their hives, this season, was April 14th, and the first material gathered was sawdust. Green or newly cut white ash trees were sawed into reaper teeth and the dust was taken from under the rows and carried upon land near by. Bees literally swarmed over the heaps of sawdust. The bees loaded their legs with a whitish substance, somewhat glutinous and sweetish. The dust is rich in the material gathered by the bees.

C. J. ROBINSON.

Richford, N. Y., April 23, 1881.

The Result.—The long winter is over and genial spring is here. What bees I have are now bringing in pollen from soft maples. I wintered 13 colonies on the south side of a tight board fence and lost 3; and I wintered 18 where the wind blew on them and lost 15. I have now 13 colonies; all appear to be doing well.

MRS. C. M. KINGSLEY.

Elvaston, Ill., April 28, 1881.

Mellilot Clover as a Fertilizer.—Is mellilot clover of much value to plow under to enrich poor or heavy clay soil? If it is a good fertilizer, it will do good to have that fact known in connection with its other qualities. The fertilizing value of white clover, also, may not be fully known.

P. MOYER.

Clark, Pa., April 25, 1881.

[As we have heretofore stated, mellilot is an excellent fertilizer; some claim that it is superior to red clover.—ED.]

Lost 6 out of 22 Colonies?—I had 22 colonies last fall—11 in Langstroth hives packed with chaff on the sides and top, and 11 in Kidder hives. I lost 3 in each kind of hives. Nine-tenths of the bees in this section are dead. N. wintered 90 on the summer stands and lost 60; W., 24 in box hives and lost all; O. had 40, and but 3 weak ones remain; R. 17, and 1 left; A. wintered 22 in the cellar, and has 3 now; G. 14, none left; 50 or 60 more have lost bees in about the same ratio. During swarming time, will it be safe to cut out the queen-cells and turn the queen loose, without caging? I consider the BEE JOURNAL as a weekly very valuable, and much more so than a monthly.

L. DENSMORE.

Livonia Station, N. Y., April 27, 1881.

[It is not always safe to do so, but as a general rule, during the commotion and confusion incident to swarming, the advent of a strange queen passes without notice.—ED.]

Lost 13 out of 42 Colonies.—Bees are picking up nicely during the last week. I lost 13 out of 42 colonies. The cold spell in March was the worst on them. Cause of loss: insufficient ventilation.

C. F. MUTH.

Cincinnati, O., April 25, 1881.

Once 14; Now None.—There you have it. Just as I began to flatter myself that I knew something about bees, along came blizzard after blizzard, and snow after snow, till the poor bees had to give up; and I—well, I—shall have to get Cyprians, or something else, and begin anew. In this locality all the bees are dead—not one left. Some of my bees were in single and some in double-walled hives—some in old and some in new hives—those that lived the longest were in new double-walled hives. May the frequent visits of the Weekly BEE JOURNAL continue to cheer its readers for years to come.

A. G. BENEDICT.

Millard, Wis., April 11, 1881.

The Cause of Disaster.—My 163 colonies have dwindled to 76. The Italians are carrying in pollen to-day, while the blacks are only eager to pilfer from the remains of their neighbors. My bees were boxed and packed in chaff, after the most approved methods, but exposed to the west and north winds. After reading the reports given in the BEE JOURNAL, with the experience of years and the lessons taught by the bee-keepers in this section, I am satisfied that it is more the place than any one condition. One of our bee-keepers reports a loss of 28 out of 30 in box hives unprotected and on the summer stands; another had 70, all boxed in chaff with shingled caps, all dead but 20; another had 17, all dead; another 60, a few weak ones left; several had from 3 to 10, all are dead; a Mr. Stinson had 113 placed on the east side of a large building and very much protected on all sides, boxed in coarse straw, and all are strong and healthy; another, situated on the east side of a chestnut grove, with box hives upon benches 3 feet high, no protection, and all are alive and strong, no signs of disease; another put 30 colonies into a cellar, and after this long blizzard winter all came out right. I am now compelled, after looking over all the testimony, to decide that more depends upon the place than any conditions of packing, boxing, etc. Mr. Muth, in a private letter just received, reports a loss of 25 per cent. Other prominent bee-keepers report even much greater losses. So I am not discouraged, but shall rally to new and untried methods to winter bees successfully. When one feels that the obstacles in profitable bee-keeping are almost surmounted, and that we are just now going to make some money and run the thing after our own notion, to get such a set-back takes the conceit out of us a little. It is really consoling that such veterans as Muth, Doolittle, etc., are fallible with the rest of us.

D. VIDEOT.

North East, Pa., April 25, 1881.

Survival of the Fittest.—After a careful examination I find but 15 colonies out of 31 that are certainly all right—a loss of 51 per cent. The hybrids stood the winter much better than the natives—at least all the bees alive are well marked. They are now carrying in natural pollen. It is possible that this year may develop a harder class for the best only survive.

F. A. GROVE.

Kirkville, Mo., April 24, 1881.

Lost 33 out of 85 Colonies.—Last fall I had 85 colonies in good condition. I wintered them in the cellar, ventilation same as on summer stands. I now have 45 good colonies and 7 weak ones, showing a loss of 33, nearly all occasioned by starvation; 3 only had the dysentery. Fully 75 per cent. of the bees in this locality are dead. Success to the BEE JOURNAL.

J. H. DAVIS.

Stockbridge, Wis., April 10, 1881.

Loss of Bees in Western Ontario.—Owing to the increase in other branches of my business I was compelled last fall to sell my bees and supply trade, as I stated in the BEE JOURNAL in January, keeping only a few bees for some experiments I wished to make. Perhaps I was fortunate, as I find by inquiries and correspondence that 90 per cent of the bees in this section of Ontario have perished during this long cold winter. My bees did not fly from Nov. 5 until March 4. Those stored in well built houses and those packed in chaff on the summer stands shared alike; about all are dead now. What bees I had any personal knowledge of last fall had so much unsealed honey that I was confident, if the winter was a hard one, they could not survive. There are many causes for this great loss, but I believe the great cause is the want of proper care and attention in August and September. The only men that make a success of bee-farming are those who study the business, read and experiment, always devoting the necessary time and attention to them. All who have not learned this must do so sooner or later. Why not attend to the bees? If they are worth having they are worth attending to; who ever succeeded in any business that did not look after it

properly? Where the bees are to come from to replenish is something I don't know. But I think any persons not too far away, having bees for sale, who may advertise them in the BEE JOURNAL, will get hundreds of orders from this section.

W. G. WALTON.

Hamilton, Canada, April 20, 1881.

It Pays to Take the Weekly.—Every apiarist should take the Weekly BEE JOURNAL. Last year I lost money simply because the Monthly did not reach me in time to tell me that the crop was short. I sold my honey a few days too soon. We are finally favored with some warm weather. On Saturday, April 23, the mercury reached 66° Fahr., and lots of bees swarmed out; I hope to have some left.

H. B. ROLFE.

Westfield, N. Y., April 24, 1881.

Bee-Keeping in Kansas.—The losses of bees in this vicinity have not been accurately ascertained but will probably rate about 50 per cent. Bees are mostly wintered here on summer stands without protection, and losses are usually for want of stores. Such was the case here generally the past winter, with few exceptions. There was only one month during winter in which bees did not fly. I successfully wintered a light nucleus on 4 Langstroth frames, on the summer stand, by covering the hive with straw and closing the entrance entirely during the coldest weather. Bees are now gathering honey from wild raspberry and plum, which are 2 or 3 weeks later than usual. The Western National Fair Association, at their fair at Lawrence, Kan., in 1880, gave first and second premiums of \$25.00 and \$12.50 for best and second best 25 lbs. of honey in combs shown in glass boxes. As the tendency seems to be to planting especially for bees, what more inviting field for the apiarist than Kansas, with her cheap lands and mild climate?

D. P. NORTON.

Council Grove, Kan., April 25, 1881.

[Such liberal premiums ought to induce the Kansas bee-keepers to give their best attention to production and marketing, and thus elevate the profession by the adoption of the most scientific and progressive management.—ED.]

Half of the Bees Dead.—About ½ of the bees in this locality are dead, including nearly all those in box hives. Mine are in movable frame hives, and were wintered on the summer stands, covered with straw, and having ventilation at the top. I lost 4 out of 21, caused by ice forming at the entrance and smothering them; they had plenty of stores.

FRED L. MERRICK.

Kankakee, Ill., April 25, 1881.

Bees in Kane Co., Ill.—The majority of bees in this part of Illinois are very quiet. Mr. Marvin put up 90 colonies of Italians last fall in his bee cellar, in this city, and has taken out 70 dead ones. Those alive are so weak in bees that they will not be able to do much in the way of laying up a surplus, no matter what the season may prove to be. His bees in this place were put up early in November, and were taken out of the cellar on the 22d and 23d inst., both days being quite warm. His apiary at the farm, some 14 miles west of this city, contained about 170 colonies last fall. This apiary was also moved to the cellar early in November, the majority of the colonies having ample stores. The colonies were removed from the cellar on the 23d and 24th inst. About 70 colonies were dead and the balance were in a moderate condition. Some of the dead had from 30 to 40 lbs. of honey. To-day, April 25, the soft maples are in full bloom and the prospect for an abundance of white clover is very promising. We fear, however, that our strain of Italians will not be able this season to overstock the market with honey. Henceforth we must pay more attention to the hardy strains, such as have sprung up in various parts of Michigan, then we can laugh at such mild winters and poor honey seasons as the last have been.

M. M. BALDRIDGE.

St. Charles, Ill.

Much Encouraged.—I am much encouraged by reading the Weekly BEE JOURNAL, as I have wintered 8 colonies successfully, without loss, which is more than my neighbors have done. Nearly all I have conversed with have lost heavily. I have double-walled, movable frame hives, and use absorbents over the frames. To these I give credit for my success in wintering.

S. OVIATT.

Newton Falls, O., April 25, 1881.

Packed in Wild Hay.—I packed 3 colonies of hybrids in wild hay last November. They had no flight till March, when they were all right. Now the parent colony is dead and one is weak and one strong.

L. C. WEMPLE.

Roger's Park, Ill., April 21, 1881.

Good Results.—I think ¾ of the bees in this section are dead. I wintered 50 colonies with a loss of only 2; the balance are in good condition. I owe my success to studying the BEE JOURNAL. My bees were housed 134 days with no chance for a flight. Last year was the best we ever had for honey. The Weekly BEE JOURNAL is a 1, and every bee-keeper should have it, just as much as hives to keep his bees in.

C. F. GREENING.

Grand Meadow, Minn., April 20, 1881.

Spring has Come at Last.—The soft winds from the south of last week have taken off the snow and brought mother earth to view, while all the spring birds, frogs, and all animate nature, seem to join in the chorus, singing, "spring has come." This month has been dry up to last night, when we had a thunder storm. Bees gathered pollen for the first time, to-day, on hazel brush. I got my bees out on April 23, and gave them an overhauling. I found 12 colonies dead out of 76; they had plenty of honey. The medium colonies wintered the best. The last 2 or 3 weeks told on them; they seemed to think it was time to have their liberty. The ice in the lake holds its own yet, but must soon give way.

M. S. SNOW.

Osakis, Minn., April 25, 1881.

Lost 37 out of 40 Colonies.—The bees are nearly all dead in this vicinity. I have kept bees for 12 years and never before lost a colony in wintering when they had honey enough; but this winter I lost 37 out of 40 having plenty of honey. They died of dysentery, caused from unripe honey, gathered late in the fall. I packed them as usual. I use a box with 3 inches of space on the bottom, and all around the hive; filled with sawdust, leaving the entrance open ¼ x 2 inches; two thicknesses of carpets over the frames and 9 inches of chaff on the carpet. I like the Weekly BEE JOURNAL very much.

F. F. ALDERFEE.

Mainland, Pa., April 25, 1881.

Bees in Maine.—We have had rather a hard winter, or perhaps I ought to say, hard spring, in Maine. I think about ½ of the bees are dead; some have lost all, others from ½ to 11-12, and still they are dying. I have lost 10 out of 50, and may lose more. I tried to winter colonies that were too small, consequently they could not keep up the heat and have "gone where the woodbine twineth," though I have some of the weak ones that are now gaining in bees. The cause of my "spring dwindling" is old and unproductive queens. I have lost 3 that had plenty stores of honey, and were all clean; and 3 or 4 with dysentery. The bee-keepers of Piscataquis, Penobscot and Somerset counties, met at Dexter, the 14th of April, to form a Bee-Keepers' Association, to be called the North Eastern Bee Association, of Maine. They chose officers, and in consequence of the bad going and the small attendance, will meet again on May 12.

LUCIAN FRENCH.

Dexter, Maine, April 21, 1881.

Good.—I wintered 62 colonies and lost but 2, leaving 60. Some in this locality have lost all their bees, others ½, but as a general thing ¾ of the bees are dead.

B. F. SANFORD.

Plover, Wis., April 22, 1881.

SPECIAL NOTICES.

Single copies of the JOURNAL are sent postage paid for 5 cents each.

The attention of bee-keepers is directed to the advertisement of Champion Bee Hive Manufacturing Co.

Those who may wish to change from other editions to the Weekly, can do so by paying the difference.

The Volume of the BEE JOURNAL for 1880, bound in stiff paper covers, will be sent by mail, for \$1.50.

When changing a postoffice address, mention the old address as well as the new one.

We have prepared Ribbon Badges for bee-keepers, on which are printed a large bee in gold. Price 10 cents each, or \$8.00 per hundred.

Notices and advertisements intended for the Weekly BEE JOURNAL must reach this office by Friday of the week previous.

We can supply but a few more of the back numbers to new subscribers. If any want them, they must be sent for soon.

Constitutions and By-Laws for local Associations \$2 per 100. The name of the Association printed in the blanks for 50 cents extra.

Food for the Brain and Nerves that will invigorate the body without intoxicating, is what we need in these days of rush and worry. Parker's Ginger Tonic restores the vital energies, soothes the nerves and brings good health quicker than anything you can use.—*Tribune*. See other column. 18w4t

The date following the name on the wrapper label of this paper indicates the time to which you have paid. In making remittances, always send by postal order, registered letter, or by draft on Chicago or New York. Drafts on other cities, and local checks, are not taken by the banks in this city except at a discount of 25c., to pay expense of collecting them.

PREMIUMS.—For a club of 2, weekly we will give a copy of "Bee-Culture;" for a club of 5, weekly, we will give a copy of "Cook's Manual," bound in cloth; for a club of 6, we give a copy of the JOURNAL for a year free. Do not forget that it will pay to devote a few hours to the BEE JOURNAL.

At the Chicago meeting of the National Society we were requested to get photographs of the leading apiarists, to sell to those who wanted them. We can now supply the following at 25 cents each: Dzierzon, the Baron of Berlepsch, and Langstroth. The likeness of Mr. Langstroth we have copied, is one furnished by his daughter, who says, "it is the only one ever taken when he was in good health and spirits." We are glad to be able to secure one of such a satisfactory nature.

Sample copies of the Weekly BEE JOURNAL will be sent free to any names that may be sent in. Any one intending to get up a club can have sample copies sent to the persons they desire to interview, by sending the names to this office.

It would save us much trouble, if all would be particular to give their P.O. address and name, when writing to this office. We have several letters (some inclosing money) that have no name. Many others having no Post-office, County or State. Also, if you live near one postoffice and get your mail at another, be sure to give the address we have on our list.

HEADQUARTERS IN THE SOUTH, for the Manufacture and Sale of BEE-KEEPERS' SUPPLIES SIMPLICITY AND LANGSTROTH HIVES AND FRAMES, The New All-in-one-piece Sections!

Having purchased, from A. I. Root, a machine for making these sections, I am ready to supply them in any quantity. Comb Foundation, made of pure yellow wax, and worked on shares; Honey and Wax Extractors, Knives, Bee Smokers, etc.

Italian Queens & Bees!

all bred from imported mothers of my own importation. Dollar Queens, ready April 1st, \$1.10, until June 1st; after, \$1.

Tested Queens from 1st March to 1st November safe arrival guaranteed and all queens sent by mail, I send no queens that I would not have for myself. Full colonies of Italian Bees from \$5 to \$8.50, according to quantity, etc. Early 4-frame nucleus, with Tested Queen, \$5. No black bees in the neighborhood. Send for my illustrated Catalogue of prices, etc. Address,

PAUL L. VIALLO, Bayou Goula, La.

Italian, Cyprian & Holy Land Queens.

Single Queen, Tested \$2.00
Untested, laying... 1.00
By mail, safe arrival guaranteed.

3-frame nucleus..... \$3.00
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Furnished after June 1st.
By express, safe arrival guaranteed.

W. P. HENDERSON, Murfreesboro, Tenn.

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Send 6 cents in stamps for sample copy. Subscription price \$1.50 per year.

McBRIDE & DRUSE, Editors,
Lincoln, Nebraska.

Read What They Say!

The only swarm of bees alive in this township, contains a queen I bought of you; they are lively.
J. R. M. ALLEN,
Greencastle, Ind., April 16, 1881.

Of the 31 dollar queens purchased of you last season, only one proved impurely fertilized. They have wintered finely, while three-fourths of the bees in this section are dead.
L. DENSMORE,
Livonia Station, N. Y., April 11, 1881.

Could give scores of letters in praise of

Our Strains of Italians,

like the above. If you want bees that are hardy enough to

SURVIVE OUR COLDEST WINTERS,

and that will pile up the box honey, give us a trial order. Can furnish

DOLLAR QUEENS,

WARRANTED QUEENS,

TESTED QUEENS and

IMPORTED QUEENS,

Bees by the Pound,

NUCLEI AND FULL COLONIES.

Before ordering goods, send us a list of articles you wish to purchase, and get our price for the same.

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H. A. BURCH & CO.,

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18wt

Free to All.

I will send free to any address a sample of the

BEST FOUNDATION made for brood frames,

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which can be used the full size of the section,

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separators. Circular, describing how foundation is

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BEFORE PURCHASING ANY

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Send for our 20th Annual Price List. Full Colonies,

Nuclei and Queens at reduced rates, also headquar-

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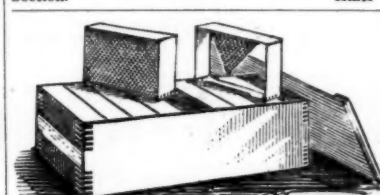
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Hives, Sections, AND BOXES.

Material for Langstroth Hives, including brood frames, 40c. each; Lewis' V-shaped groove one-piece Sections, any size to 6x8, \$5 per 1,000; Lewis' one-piece Honey Boxes of all sizes, \$2 to \$4 per 100, including glass; Dovetailed Sections, any size to 6x8, \$4 per 1,000. Manufacturing experience of 20 years. Send for Price List.

G. B. LEWIS,
Successor to Lewis & Parks, Watertown, Wis.
N. B.—There is no patent on the Lewis One-Piece Section.



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65 First Premiums, Medals and Diplomas.
—Send postal card, with name and address, for my new Illustrated Circular and Price-List, containing valuable information to all bee-keepers. CHAS. H. LAKE, Successor to the late Richard Colvin, 95 West Pratt Street, Baltimore, Md. 4wt

Friends, if you are in any way interested in

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We will with pleasure send you a sample copy of our

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journals, and everything pertaining to Bee Culture.

Nothing Patented. Simply send your address on a postal card, written plainly, to A. I. Root, Medina, O.

A NEW PLAN.—For one dollar we will send full printed directions how to prevent the end of the sheet of wax from adhering to the rolls in making comb foundation. Address,

SMITH & SMITH, Kenton, Ohio.

ITALIAN QUEENS.

Tested Queens..... \$1.50
Warranted Queens..... 1.00
Cyprian Queens, untested..... 1.00
As most all the Dollar Queens I sold last year were pure, I will warrant them this year. J. T. WILSON, Mortonsville, Woodford Co., Ky.

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FOR 1881.

It is to every person's interest, when they wish to purchase anything, to go where they can get the most for their money. State on a postal card just what you want, and we will let you know by return mail what we will furnish it for. No Circulars. Address,

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1881.

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Tested Queens, in July and after..... 2.00

I guarantee all my Queens to be purely mated.

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(Sunny Side Apiary).

Pure Italian Queens, Bees, Colonies

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Italian Queens Only 80 Cents.

Warranted \$1.00. Tested \$1.50. 10 frame Colonies

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